

Supplementary material:

Repeated ecomorphological divergence in *Bujurquina* (Teleostei: Cichlidae)
body shape

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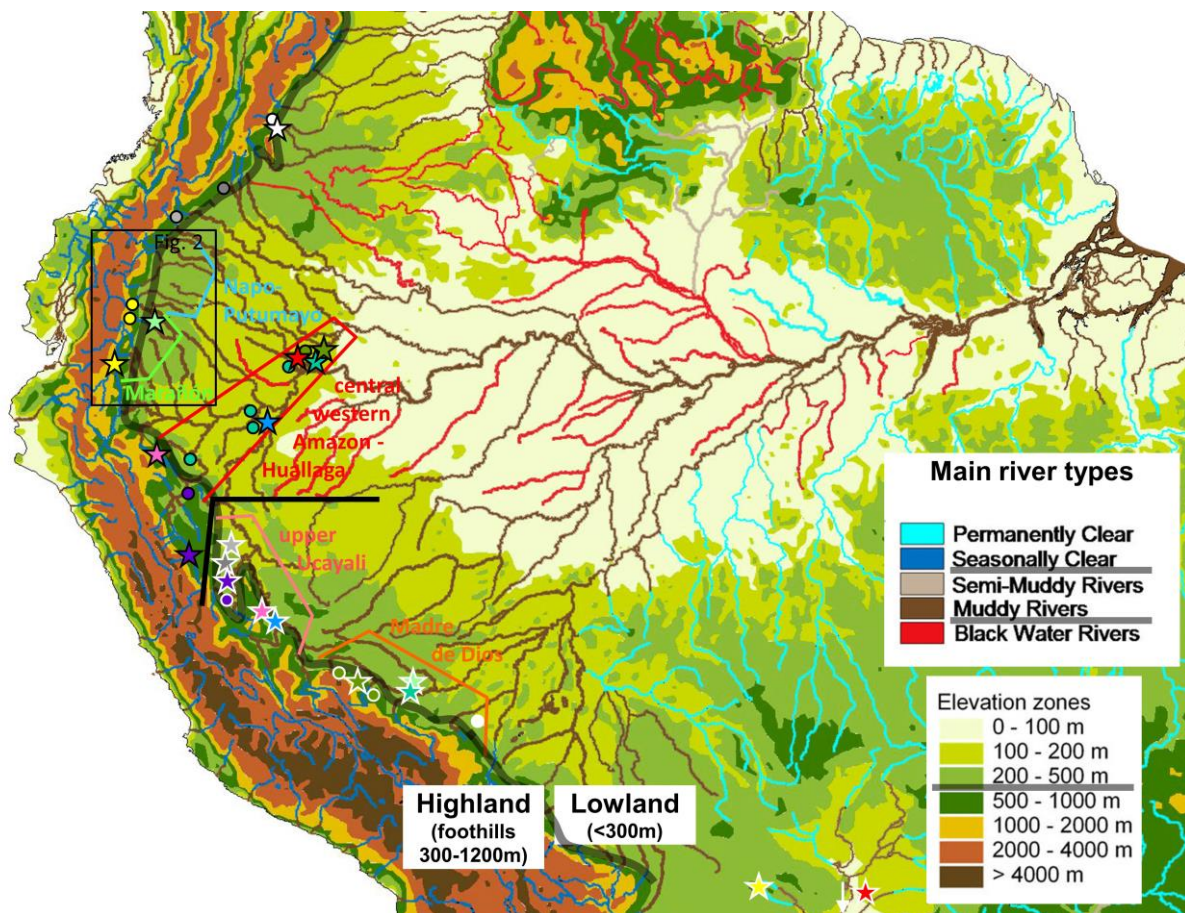
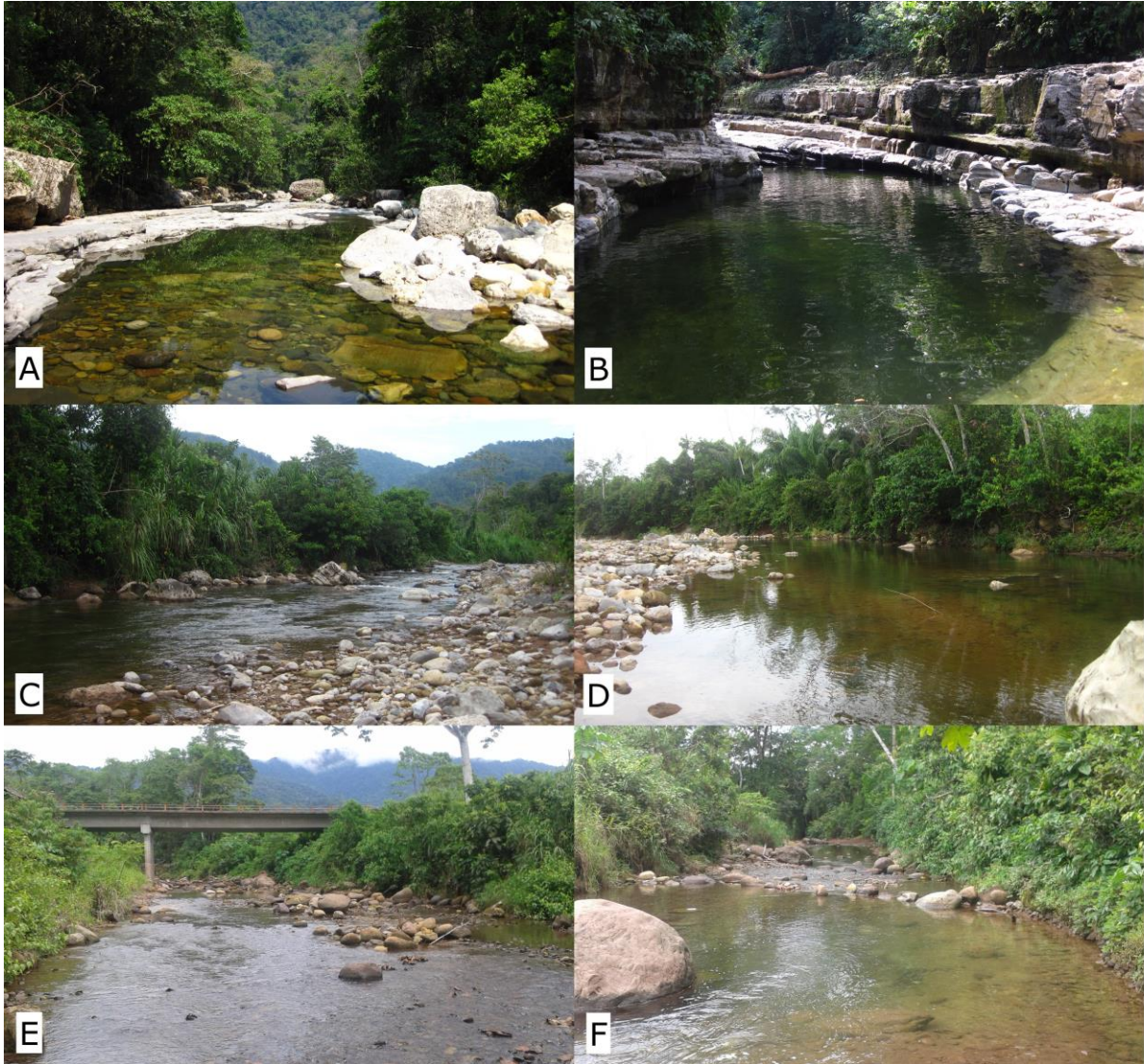


Fig. S1. Distribution of valid species and the two main groups of *Bujurquina*, along with four of the putative species identified, on a map identifying i) the division between highland and lowland areas of the western Amazon (shown by the grey line), and ii) the main river types in the Amazon. Compare with Fig. 1.

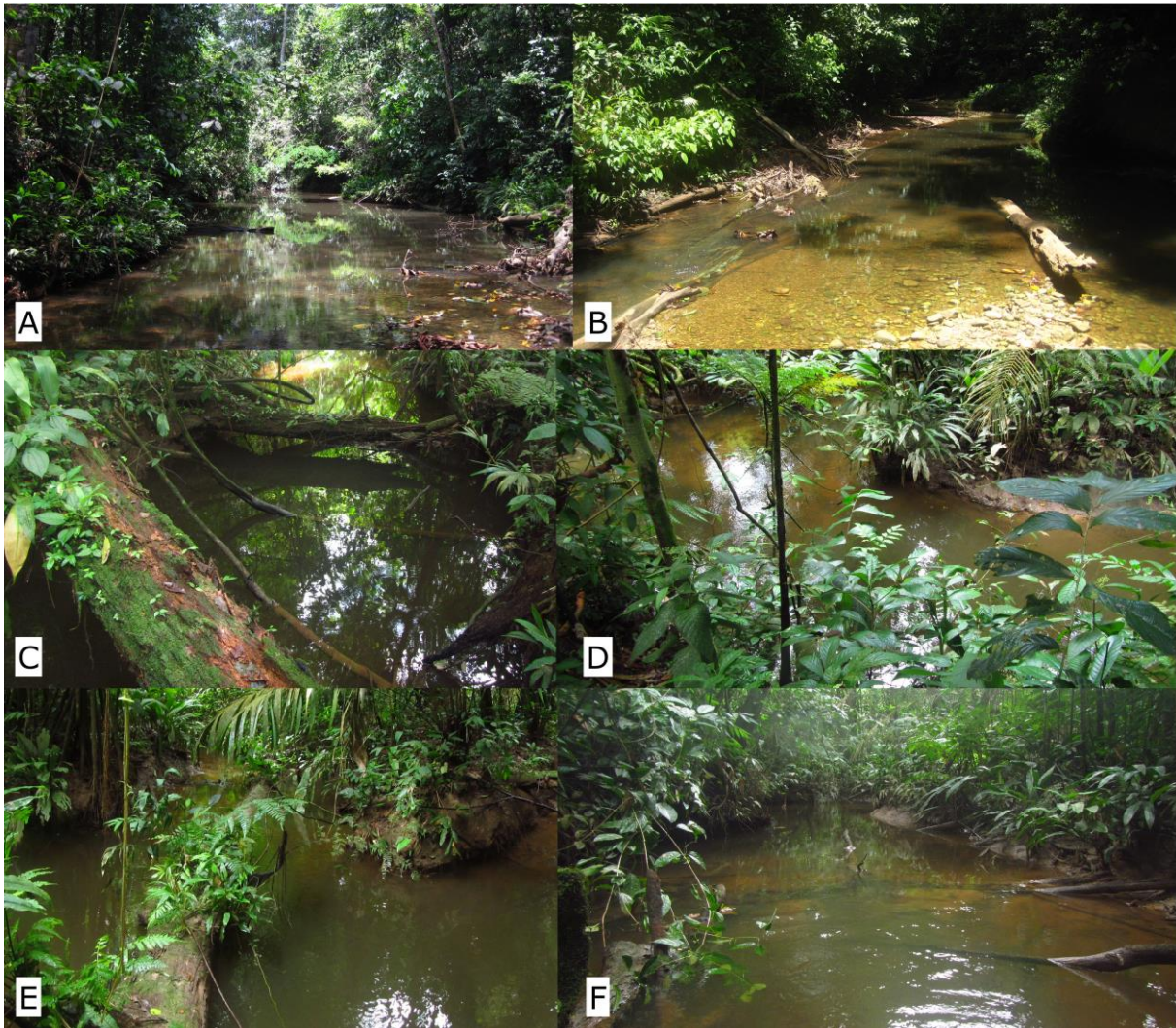
Fig. S2. Examples of highland and lowland habitats of *Bujurquina*. In some of our examples we have deliberately shown localities with intermediate characteristics to highlight the complexity of the habitats and to contrast them with the typical highland and lowland habitats.

i) Highland habitats:



A-D) Quebrada Samaireni at Betania, Junín, Perú, September 2015, end of low-water season. This is a habitat of the highland species *B. labiosa*. A-B) High elevation locality showing pools within a steep and fast running river bed ($11^{\circ}03'24.91''S$, $73^{\circ}46'49.05''W$; 370 m elevation). C-D) Middle elevation locality showing running river and a pool ($11^{\circ}3'8.70''S$, $73^{\circ}45'36.40''W$, 260 m elevation). **E-F)** Highland stream above Puerto Bermudez ($10^{\circ}20'23.60''S$, $74^{\circ}59'16.10''W$; 262 m elevation; start of October 2015, end of low-water season), Pasco, Perú, showing the fast running, bouldery, clear-water stream and a pool.

ii) Lowland habitats: lowland streams



A-B) Quebrada Chincoreani, Pasco, Perú, a lowland locality within lowland forest ($10^{\circ}14'12.10''\text{S}$, $74^{\circ}55'38.70''\text{W}$; 260 m elevation, start of October 2015, end of low-water season). This is a lowland locality however with a stony river bed rather than the typical lowland soft-bottomed river bed. Due to this habitat mixing both lowland and highland species are found at this locality. **C-F)** A typical rainforest *terra firme* stream, Quebrada Sabalillo ($3^{\circ}27'08.4-45.6''\text{S}$, $72^{\circ}29'11.8-22.5''\text{W}$; 110-120 m elevation), Loreto, Peru, June 2018, start of low-water season; this is a habitat of the lowland species *B. sp. Oran*.

iii) Lowland habitats: lowland rivers



A-B) Mouth of Quebrada Samaireni at Betania into the Rio Tambo ($11^{\circ} 2'38.18''\text{S}$, $73^{\circ}44'47.62''\text{W}$; 242 m elevation), Junín, Perú, September 2015, end of low-water season. This is in character a lowland locality showing the slow flowing, turbid stream, with muddy bottom. This is a typical locality of *B. robusta*. However the both the upper reaches of the Quebrada Samaireni and the Rio Tambo itself in this area are strongly flowing with rocky bottoms and the area is thus still part of the Andean foothills. **C-D)** Tributary of Rio Pichis close to its mouth above Puerto Bermúdez, Pasco, Perú, low elevation locality ($10^{\circ}18'43.40''\text{S}$, $74^{\circ}55'48.20''\text{W}$, 243 m elevation, start of October 2015, end of low-water season). A semi-turbid stream river, the habitat of the lowland species *B. megalospilus*. **E-F)** Typical lowland inundable streams, the lower portions of Sabalillo (E) ($3^{\circ}28'50.781''\text{S}$, $72^{\circ}29'58.707''\text{W}$) and

Oran (F) (3°28'15.409"S, 72°31'1.400"W) streams, ca 100 m elevation, Loreto, Peru, at start of the low-water season (June 2018) with muddy water with a blackish tinge and soft bottom of mud and clay; this is a habitat of the lowland species *B. syspilus*.

Table S1. Specimens included in the study.

species	lot *	MOR examined	MOL sequenced	Accession number	locality	locality GPS	tributary	drainage basin	country
<i>Bujurquina apparauana</i>	P19_30	10			Agua Salada stream on rd. UC503 Campo Verde-Tournavista 5km before Honoria turnoff	S 08 42 38.8, W 74 47 52.6	Pachitea	Ucayali	Perú
<i>Bujurquina apparauana</i>	P19_32	6			Quebrada 11 air km before Tournavista on rd. UC503 Campo Verde-Tournavista	S 08 52 28.6, W 74 47 55.2	Pachitea	Ucayali	Perú
<i>Bujurquina eurhinus</i>	P19_39	12			Agua Caliente stream 1st air km before Honoria on rd. PE 30C	S 13 12 30.3, W 75 22 15.4	Inambari	Madre de Dios	Perú
<i>Bujurquina eurhinus</i>	P19_40	10			Small stream trib of Rio Marcapata on a dirt road from PE 30C in San Lorenzo village	S 13 12 30.3, W 75 22 00.7	Inambari	Madre de Dios	Perú
<i>Bujurquina eurhinus</i>	P19_31	5		EU706358	Quebrada 1km before Tournavista on rd. UC503 Campo Verde	S 08 55 23.3, W 74 43 06.4	Pachitea	Ucayali	Perú
<i>Bujurquina hopyrhy</i>	P19_33	2			Quebrada 5km S from Honoria turnoff on rd. UC503 Campo Verde-Tournavista	S 08 47 43.9, W 74 47 57.8	Pachitea	Ucayali	Perú
<i>Bujurquina hopyrhy</i>	P19_34	7			Large stream trib of Pachitea on PE 5N 30 km N from Puerto Inca turnoff at Pt Sungaro	S 09 07 30.0, W 75 01 00.3	Pachitea	Ucayali	Perú
<i>Bujurquina hopyrhy</i>	P19_35	3			Small stream on rd641 3km from PE 5N turnoff to Yuypachichis	S 09 37 11.7, W 74 59 16.1	Pachitea	Ucayali	Perú
<i>Bujurquina huallagae</i>	P19_24	4			Small stream 100m from rd 5N 5km SE of Pizana	S 07 55 40.0, W 76 41 04.9	Huallaga	Huallaga	Perú
<i>Bujurquina huallagae</i>	P19_25	8			River on rd 5N 2km SE of Nuevo Horizonte	S 08 07 04.7, W 76 36 04.9	Huallaga	Huallaga	Perú
<i>Bujurquina huallagae</i>	P19_26	14			Side channel of Huallaga on rd 5N PE, Anda 300m S of Santo Domingo de Anda	S 09 03 47.6, W 76 04 28.5	Huallaga	Huallaga	Perú
<i>Bujurquina sp. cf. huallagae</i>	P19_19	1			1st large stream E of Chuzuta on continuation of rd SM106	S 06 33 40.7, W 76 06 15.5	Huallaga	Huallaga	Perú
<i>Bujurquina sp. cf. huallagae</i>	P19_21	2			stream 0.5km W of Pauca on rd SM107 trib of Rio Panasa	S 06 56 36.6, W 76 10 23.2	Panasa	Huallaga	Perú
<i>Bujurquina sp. cf. huallagae</i>	P19_22	1			Rio Panasa last crossing 11 air km above Shamboyacu on rd SM107	S 07 06 18.6, W 76 04 54.8	Panasa	Huallaga	Perú
<i>Bujurquina labiosa</i>	P15_01	6		EU706355	Betania, pools	11° 32'41.91" S, 73°46'48.05" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_01_3		OP436073		Betania, pools	11° 32'41.91" S, 73°46'48.05" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_01_4		OP436074		Betania, pools	11° 32'41.91" S, 73°46'48.05" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_01_2		OP436071		Betania, pools	11° 32'41.91" S, 73°46'48.05" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_01_5		OP436072		Betania, pools	11° 32'41.91" S, 73°46'48.05" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_03	3			Betania stream on rd. Betania - Atalaya	11° 38'7.0" S, 73°45'36.4" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_04	2			Betania stream on rd. Betania - Atalaya	11° 38'7.0" S, 73°45'36.4" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_04	2			Quebrada Aerija u Atalaya	10°42'41.28" S, 73°47'44.60" W	Tambo	Ucayali	Perú
<i>Bujurquina labiosa</i>	P15_04	2			Quebrada Aerija u Atalaya	10°42'41.28" S, 73°47'44.60" W	Tambo	Ucayali	Perú
<i>Bujurquina mariae</i>	C14_01	5		KR160882	Rio Humadajá al Humadajá	3°42'59.58" N, 73°45'33.58" W	Miera	Orinoco	Colombia
<i>Bujurquina megalospius</i>	P15_08	5			smaller tributary above Puerto Bermudez	10°18'13.85" S, 74°56'17.40" W	Pichis	Ucayali	Perú
<i>Bujurquina megalospius</i>	P15_08	5			smaller tributary above Puerto Bermudez	10°18'13.85" S, 74°56'17.40" W	Pichis	Ucayali	Perú
<i>Bujurquina megalospius</i>	P15_05	5			larger tributary above Puerto Bermudez	10°18'43.40" S, 74°59'48.20" W	Pichis	Ucayali	Perú
<i>Bujurquina megalospius</i>	P15_05	5			larger tributary above Puerto Bermudez	10°18'43.40" S, 74°59'48.20" W	Pichis	Ucayali	Perú
<i>Bujurquina morionum (type locality)</i>	P18_5	17			Quebrada Copal at km 15 on rd Jenaro Herrera-Angamos	4 55 25.8 S, 73 32 38.5 W	Copal	Ucayali	Perú
<i>Bujurquina morionum (type locality)</i>	P18_5_09		OP436187		Quebrada Copal at km 15 on rd Jenaro Herrera-Angamos	4 55 25.8 S, 73 32 38.5 W	Copal	Ucayali	Perú
<i>Bujurquina morionum (type locality)</i>	P18_5_07		OP436184		Quebrada Copal at km 15 on rd Jenaro Herrera-Angamos	4 55 25.8 S, 73 32 38.5 W	Copal	Ucayali	Perú
<i>Bujurquina morionum (type locality)</i>	P18_5_08		OP436185		Quebrada Copal at km 15 on rd Jenaro Herrera-Angamos	4 55 25.8 S, 73 32 38.5 W	Copal	Ucayali	Perú
<i>Bujurquina sp. cf. morionum</i>	Jene_2013_71		OP436077		Rio Tapiche		Tapiche	Ucayali	Perú
<i>Bujurquina oenoblemus (type locality)</i>	Bo7_22	9			Rio Aguas Calientes	18°27'26.97" S, 59°30'31.77" W	Aguas Calientes	Paraguay	Bolivia
<i>Bujurquina oenoblemus (type locality)</i>	Bo7_22	9			Rio Aguas Calientes	18°27'26.97" S, 59°30'31.77" W	Aguas Calientes	Paraguay	Bolivia
<i>Bujurquina oenoblemus (type locality)</i>	Bo7_22	9			Rio Aguas Calientes	18°27'26.97" S, 59°30'31.77" W	Aguas Calientes	Paraguay	Bolivia
<i>Bujurquina oenoblemus (type locality)</i>	Bo7_22	9			Rio Aguas Calientes	18°27'26.97" S, 59°30'31.77" W	Aguas Calientes	Paraguay	Bolivia
<i>Bujurquina oenoblemus (type locality)</i>	Bo7_22	9			Rio Aguas Calientes	18°27'26.97" S, 59°30'31.77" W	Aguas Calientes	Paraguay	Bolivia
<i>Bujurquina ortega</i>	P19_18	5		EF432954	River Pte. Indochu on rd 5N 7km W of Moyobamba	S 06 22 57.0, W 77 02 30.2	Mayo	Huallaga	Perú
<i>Bujurquina peregrinabunda</i>	P18_18	1			Agua Negra left-hand cabecera	3 24 26.8 S, 72 28 22.4 W	Apayacu	Amazonas	Perú
<i>Bujurquina peregrinabunda</i>	P18_18_71		OP436203		Agua Negra left-hand cabecera	3 24 26.8 S, 72 28 22.4 W	Apayacu	Amazonas	Perú
<i>Bujurquina peregrinabunda (type locality)</i>	P18_10_4	4			small clear-water quebrada 2km E of Pebas	3 19 07.2 S, 71 50 51.3 W	Amazonas	Amazonas	Perú
<i>Bujurquina peregrinabunda (type locality)</i>	P18_10_31		OP436188		small clear-water quebrada 2km E of Pebas	3 19 07.2 S, 71 50 51.3 W	Amazonas	Amazonas	Perú
<i>Bujurquina peregrinabunda (type locality)</i>	P18_10_33		OP436190		small clear-water quebrada 2km E of Pebas	3 19 07.2 S, 71 50 51.3 W	Amazonas	Amazonas	Perú
<i>Bujurquina peregrinabunda (type locality)</i>	P18_10_32		OP436189		small clear-water quebrada 2km E of Pebas	3 19 07.2 S, 71 50 51.3 W	Amazonas	Amazonas	Perú
<i>Bujurquina peregrinabunda (type locality)</i>	P18_10_34		OP436191		small clear-water quebrada 2km E of Pebas	3 19 07.2 S, 71 50 51.3 W	Amazonas	Amazonas	Perú
<i>Bujurquina robusta</i>	P15_02	8			mouth of Betania stream	11° 2'38.18" S, 73°44'47.62" W	Tambo	Ucayali	Perú
<i>Bujurquina robusta</i>	P15_02_09		OP436214		mouth of Betania stream	11° 2'38.18" S, 73°44'47.62" W	Tambo	Ucayali	Perú
<i>Bujurquina robusta</i>	P15_02_12		OP436080		mouth of Betania stream	11° 2'38.18" S, 73°44'47.62" W	Tambo	Ucayali	Perú
<i>Bujurquina robusta</i>	P15_02_11		OP436079		mouth of Betania stream	11° 2'38.18" S, 73°44'47.62" W	Tambo	Ucayali	Perú
<i>Bujurquina robusta</i>	P15_04	5			Quebrada Aerija u Atalaya	10°42'41.28" S, 73°47'44.60" W	Tambo	Ucayali	Perú
<i>Bujurquina robusta</i>	P15_04_23		OP436081		Quebrada Aerija u Atalaya	10°42'41.28" S, 73°47'44.60" W	Tambo	Ucayali	Perú
<i>Bujurquina sypsius</i>	Bo9_1	3			Rio Yavari, mouth of unnamed creek	S4 17 07.0 W70 17 32.8	Javari	Amazonas	Brazil
<i>Bujurquina sypsius</i>	09_1_4_3		OP436089		Rio Yavari, mouth of unnamed creek	S4 17 07.0 W70 17 32.8	Javari	Amazonas	Brazil
<i>Bujurquina sypsius</i>	09_1_1_2		OP436088		Rio Yavari, mouth of unnamed creek	S4 17 07.0 W70 17 32.8	Javari	Amazonas	Brazil
<i>Bujurquina sypsius</i>	09_1_1_1		OP436078		Rio Yavari, mouth of unnamed creek	S4 17 07.0 W70 17 32.8	Javari	Amazonas	Brazil
<i>Bujurquina sypsius</i>	116_VivL		OP436084		Rio Yavari, mouth of unnamed creek	S4 17 07.0 W70 17 32.8	Javari	Amazonas	Brazil
<i>Bujurquina sypsius</i>	P15_13	2			Qda. Manzanillo, Iquitos		Iquitos	Amazonas	Perú
<i>Bujurquina sypsius</i>	P15_13_66		OP436087		Qda. Manzanillo, Iquitos		Iquitos	Amazonas	Perú
<i>Bujurquina sypsius</i>	P15_13_65		OP436085		Qda. Manzanillo, Iquitos		Iquitos	Amazonas	Perú
<i>Bujurquina sypsius</i>	P15_14	1			Qda. Manzanillo, Iquitos		Iquitos	Amazonas	Perú
<i>Bujurquina sypsius</i>	P15_14_64		OP436086		Qda. Manzanillo, Iquitos		Iquitos	Amazonas	Perú
<i>Bujurquina sypsius</i>	P18_20	11			Oran, Quebrada Piedral low muddy section	3 24 49.7 S, 72 33 28.8 W	Piedral	Napo Ucayali confluence	Perú
<i>Bujurquina sypsius</i>	P18_20_80		OP436220		Oran, Quebrada Piedral low muddy section	3 24 49.7 S, 72 33 28.8 W	Piedral	Napo Ucayali confluence	Perú
<i>Bujurquina sypsius</i>	P18_20_61		OP436221		Oran, Quebrada Piedral low muddy section	3 24 49.7 S, 72 33 28.8 W	Piedral	Napo Ucayali confluence	Perú
<i>Bujurquina sypsius (type locality)</i>	P18_12_6	6			Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius (type locality)</i>	P18_12_37		OP436192		Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius (type locality)</i>	P18_12_38		OP436193		Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius (type locality)</i>	P18_12_39		OP436194		Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius (type locality)</i>	P18_12_40		OP436195		Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius (type locality)</i>	EF432952				Pebas, small boat-landing pool/creek at mouth of Gebrada Sacarita	3 19 40.9 S, 71 53 17.2 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius</i>	P18_13	1			Pebas, Nueva Esperanza, ca 15 km W of Pebas	3 20 29.8 S, 71 59 39.7 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius</i>	P18_13_44		OP436210		Pebas, Nueva Esperanza, ca 15 km W of Pebas	3 20 29.8 S, 71 59 39.7 W	Ampliyacu	Amazonas	Perú
<i>Bujurquina sypsius</i>	P18_08	5			Jenaro Herrera, Quebrada Parnayari ca 1.6 river km from mouth	4 54 48.9 S, 73 40 06.3 W	Parnayari	Ucayali	Perú
<i>Bujurquina sypsius</i>	P18_08_13		OP436215		Jenaro Herrera, Quebrada Parnayari ca 1.6 river km from mouth	4 54 48.9 S, 73 40 06.3 W	Parnayari	Ucayali	Perú
<i>Bujurquina sypsius</i>	P18_08_14		OP436216		Jenaro Herrera, Quebrada Parnayari ca 1.6 river km from mouth	4 54 48.9 S, 73 40 06.3 W	Parnayari	Ucayali	Perú
<i>Bujurquina sypsius</i>	P18_09	5			Shore by guardhouse in Pacaya-Samiria	4 48 53.6 S, 73 47 32.0 W	Long Cocha	Ucayali	Perú
<i>Bujurquina sypsius</i>	P18_09_19		OP436218		Shore by guardhouse in Pacaya-Samiria	4 48 53.6 S, 73 47 32.0 W	Long Cocha	Ucayali	Perú
<i>Bujurquina sypsius</i>	P18_09_18		OP436217		Shore by guardhouse in Pacaya-Samiria	4 48 53.6 S, 73 47 32.0 W	Long Cocha	Ucayali	Perú
<i>Bujurquina sypsius</i>	09_8_1_4		OP436076		small waterfalls at Carrera Leticia ca 12km from Airport	S 06 29'1.66" S, 54°35'11.98" W	Piray-Guzazo	Paraná	Colombia
<i>Bujurquina tambopatae (type locality)</i>	P7_1	8			arroyo km13 on road P. Maldonado-Cuzco	12°38'19.01" S, 69°15'32.93" W	Madre de Dios	Madera	Perú
<i>Bujurquina tambopatae (type locality)</i>	P7_1_49		OP436212		arroyo km13 on road P. Maldonado-Cuzco	12°38'19.01" S, 69°15'32.93" W	Madre de Dios	Madera	Perú
<i>Bujurquina tambopatae (type locality)</i>	P7_1_50		OP436213		arroyo km13 on road P. Maldonado-Cuzco	12°38'19.01" S, 69°15'32.93" W	Madre de Dios	Madera	Perú
<i>Bujurquina vittata</i>	A12_17	8			lower Rio Piray-Guzazo	26°29'1.66" S, 54°35'11.98" W	Piray-Guzazo	Paraná	Argentina
<i>Bujurquina vittata</i>	P16-13	2			Arroyo Paso Itia	25°22'58.5 S, 54°41'38.5 W	Acray	Paraná	Paraguay
<i>Bujurquina vittata</i>	EF432951				Arroyo Paso Itia	25°22'58.5 S, 54°41'38.5 W	Acray	Paraná	Paraguay
<i>Bujurquina vittata</i>	EF432950				Arroyo Paso Itia	25°22'58.5 S, 54°41'38.5 W	Acray	Paraná	Paraguay
<i>Bujurquina zamorensis (type locality)</i>	E09_19	1			Small trib. of Rio Zamora on rd. E45 1km S from San Roque	S3 41 56.8 W78 36 14.8	Pachicuzta	Zamora - Santiago - Marañón	Ecuador
<i>Bujurquina zamorensis (type locality)</i>	E09_19_1_5		OP436097		Small trib. of Rio Zamora on rd. E45 1km S from San Roque	S3 41 56.8 W78 36 14.8	Pachicuzta	Zamora - Santiago - Marañón	Ecuador
<i>Bujurquina zamorensis</i>	E09_21_1_6		OP436096		Rio Puyo on side rd. 3.5 from rd E45 S of Puyo	S1 33 41.7 W77 55 40.1	Puyo	Pastaza - Marañón	Ecuador
<i>Bujurquina zamorensis</i>	E09_21_2_7		OP436095		Rio Puyo on side rd. 3.5 from rd E45 S of Puyo	S1 33 41.7 W77 55 40.1	Puyo	Pastaza - Marañón	Ecuador
<i>Bujurquina zamorensis</i>	E09_22_1_1		OP436093		Small trib. of Rio Puyo affluent 2km N of E45 S of Puyo	S1 29 40.0 W77 56 11.5	Puyo	Pastaza - Marañón	Ecuador
<i>Bujurquina zamorensis</i>	E09_22_1_2		OP436099		Small trib. of Rio Puyo affluent 2km N of E45 S of Puyo	S1 29 40.0 W77 56 11.5	Puyo	Pastaza - Marañón	Ecuador
<i>Bujurquina zamorensis</i>	E09_22_1_8		OP436094						

Table S2. Table of proportional measurements in percent of standard length in described species of *Bujurquina*. The table includes specimens above 40 mm SL, PCA from these data (Figs. 7–11) are based on specimens above 60 mm SL. SD=standard deviation. Data for *B. pardus* is from Arbour et al. (2014) and for *B. cordemadi* from Kullander (1986). Colors aid in visualizing delimitation of the valid species from each other, with *B. sp. Oran* taken as a reference species. Values in orange are smaller than in *B. sp. Oran* and show no overlap between *B. sp. Oran* and the given species, values in green are larger than in *B. sp. Oran* and also show no overlap. Values in orange and green are thus diagnostic between *B. sp. Oran* and the described species. Values in grey are not strictly diagnostic, those in dark grey provide tendency towards separation while those in light grey provide no separation.

<i>B. apoparuana</i>					
	n	Mean	Range		SD
			min	max	
Standard length (mm)	16	56.0	43.6	79.0	
Head length	16	34.9	32.8	40.7	2.0
Snout length	16	7.8	6.5	10.1	1.0
Body depth	16	44.8	41.4	48.0	1.8
Orbital diameter	16	13.1	11.3	15.6	1.1
Head width	16	19.2	18.7	20.0	0.4
Interorbital width	16	11.6	10.8	13.2	0.7
Preorbital depth	16	7.4	6.2	9.0	0.9
Caudal-peduncle depth	16	17.2	16.2	18.2	0.5
Caudal-peduncle length	16	12.2	11.2	13.0	0.5
Pectoral-fin length	15	35.5	33.8	39.3	1.4
Pelvic-fin length	16	33.5	30.2	36.9	2.0
Last dorsal-fin spine length	14	18.6	16.9	19.6	0.8

<i>B. cordemadi</i>					
	n	Mean	Range		SD
			min	max	
Standard length (mm)	2	56.1	50.4	61.8	
Head length	2	33.5	33.3	33.7	0.2
Snout length	2	7.4	6.9	7.8	0.6
Body depth	2	42.9	42.3	43.5	0.9
Orbital diameter	2	12.7	12.1	13.3	0.8
Head width	2	19.5	19.2	19.7	0.4
Interorbital width	2	11.8	11.3	12.3	0.7
Preorbital depth	2	7.5	7.1	7.8	0.4
Caudal-peduncle depth	2	17.2	17.2	17.3	0.1
Caudal-peduncle length	2	11.6	11.3	11.8	0.4
Pectoral-fin length	2	33.3	32.5	34.1	1.1
Pelvic-fin length	2	34.7	34.5	35.0	0.3
Last dorsal-fin spine length	2	17.4	17.2	17.7	0.4

length



B. eurhinus

	n	Mean	Range min	max	SD
Standard length (mm)	22	67.9	45.0	82.5	
Head length	22	33.8	31.2	35.8	1.2
Snout length	22	9.0	7.8	10.4	0.7
Body depth	22	40.2	38.0	43.8	1.5
Orbital diameter	22	11.2	9.9	12.9	0.9
Head width	22	18.8	17.4	19.9	0.6
Interorbital width	22	11.2	10.2	13.4	0.8
Preorbital depth	22	8.6	6.7	10.1	0.9
Caudal-peduncle depth	22	16.5	14.7	24.4	1.9
Caudal-peduncle length	22	14.0	12.6	15.7	1.0
Pectoral-fin length	22	31.0	27.8	36.0	2.0
Pelvic-fin length	21	36.6	31.2	42.1	2.9
Last dorsal-fin spine length	22	16.1	14.5	18.3	1.2

B. hophrys

	n	Mean	Range min	max	SD
Standard length (mm)	15	56.6	41.2	79.7	
Head length	15	34.2	32.9	36.1	1.1
Snout length	15	8.3	6.3	11.5	1.4
Body depth	15	40.7	37.2	44.7	2.0
Orbital diameter	15	12.5	10.9	14.1	1.1
Head width	15	18.6	18.0	19.8	0.5
Interorbital width	15	10.6	9.2	12.4	0.9
Preorbital depth	15	6.9	5.6	9.2	1.1
Caudal-peduncle depth	15	15.9	14.8	16.9	0.6
Caudal-peduncle length	15	13.5	12.1	14.8	0.9
Pectoral-fin length	12	34.4	32.0	36.6	1.1
Pelvic-fin length	13	34.5	29.5	41.2	3.3
Last dorsal-fin spine length	14	16.6	10.9	18.2	1.9

B. huallagae

	n	Mean	Range min	max	SD
Standard length (mm)	26	63.4	44.0	82.8	
Head length	26	33.0	31.8	35.2	0.9
Snout length	26	8.6	7.4	9.9	0.7
Body depth	26	41.9	39.1	44.7	1.6
Orbital diameter	26	11.3	10.3	12.3	0.6
Head width	26	17.8	16.8	18.6	0.5
Interorbital width	26	11.1	9.8	13.2	0.8
Preorbital depth	26	7.6	4.9	9.7	1.0
Caudal-peduncle depth	26	16.6	15.8	17.8	0.6
Caudal-peduncle length	26	13.4	11.8	14.7	0.8
Pectoral-fin length	25	30.7	28.6	32.9	1.3
Pelvic-fin length	24	32.1	26.9	40.3	3.0
Last dorsal-fin spine length	25	17.2	15.7	19.1	0.8

B. labiosa

	n	Mean	Range min	max	SD
Standard length (mm)	3	60.9	50.4	62.6	
Head length	3	37.1	36.2	37.9	0.9
Snout length	3	10.6	9.3	11.3	1.0
Body depth	3	39.2	38.4	40.4	0.9
Orbital diameter	3	11.4	10.9	11.9	0.5
Head width	3	19.2	18.9	19.5	0.3
Interorbital width	3	9.9	8.7	10.7	0.8
Preorbital depth	3	8.6	7.8	9.8	1.0
Caudal-peduncle depth	3	15.5	14.7	16.3	0.8
Caudal-peduncle length	3	13.9	12.7	14.7	1.0
Pectoral-fin length	3	28.7	27.5	29.5	0.6
Pelvic-fin length	3	28.6	27.7	29.7	1.0
Last dorsal-fin spine length	3	14.6	13.4	15.4	0.8

B. megalospilus

	n	Mean	Range min	max	SD
Standard length (mm)	5	53.6	46.1	70.7	
Head length	5	34.6	33.4	36.9	1.3
Snout length	5	6.8	5.6	7.9	0.8
Body depth	5	43.8	42.0	44.8	1.2
Orbital diameter	5	14.0	12.4	14.9	1.0
Head width	5	20.3	20.0	20.9	0.4
Interorbital width	5	11.5	11.2	12.0	0.4
Preorbital depth	5	7.0	6.3	7.9	0.6
Caudal-peduncle depth	5	17.8	16.5	19.3	1.2
Caudal-peduncle length	5	12.1	11.2	12.7	0.6
Pectoral-fin length	5	38.5	37.2	40.6	1.3
Pelvic-fin length	5	39.2	35.1	47.6	5.0
Last dorsal-fin spine length	5	19.8	19.0	20.9	0.7

B. moriorum

	n	Mean	Range min	max	SD
Standard length (mm)	17	62.6	40.6	92.1	
Head length	17	34.4	33.8	35.7	0.5
Snout length	17	8.3	6.6	10.7	1.4
Body depth	17	42.7	40.2	46.3	1.6
Orbital diameter	17	12.8	11.1	15.0	1.3
Head width	17	19.0	18.1	20.4	0.6
Interorbital width	17	11.1	9.4	13.3	1.3
Preorbital depth	17	7.4	4.9	10.7	1.7
Caudal-peduncle depth	17	16.4	15.2	18.3	0.9
Caudal-peduncle length	17	14.0	12.6	16.0	0.9
Pectoral-fin length	16	34.7	32.8	37.4	1.2
Pelvic-fin length	17	34.3	30.2	39.9	2.7
Last dorsal-fin spine length	17	17.6	15.7	18.8	0.9

B. oenolaemus

	n	Mean	Range	SD
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			min	max	
Standard length (mm)	8	52.9	44.5	67.2	
Head length	8	39.1	38.6	40.4	0.6
Snout length	8	11.4	10.3	13.1	0.9
Body depth	8	41.9	40.7	47.2	2.0
Orbital diameter	8	12.5	11.8	12.8	0.4
Head width	8	19.3	18.8	20.8	0.6
Interorbital width	8	10.6	9.9	12.1	0.8
Preorbital depth	8	9.4	8.7	10.7	0.7
Caudal-peduncle depth	8	16.8	16.1	18.9	0.9
Caudal-peduncle length	8	11.5	10.1	13.0	1.0
Pectoral-fin length	8	30.5	29.0	32.2	1.4
Pelvic-fin length	8	32.5	30.5	34.0	1.3
Last dorsal-fin spine length	8	16.2	15.5	17.0	0.5

B. ortegai

	n	Mean	Range	SD
			min max	
Standard length (mm)	5	73.3	60.4 110.1	
Head length	5	33.4	32.9 34.1	0.6
Snout length	5	9.5	8.6 11.3	1.0
Body depth	5	40.9	37.3 42.9	2.2
Orbital diameter	5	11.0	9.4 11.9	1.0
Head width	5	18.6	17.9 19.2	0.5
Interorbital width	5	11.7	11.0 13.4	1.0
Preorbital depth	5	8.6	7.1 10.5	1.3
Caudal-peduncle depth	5	16.1	15.6 16.7	0.5
Caudal-peduncle length	4	14.9	14.1 15.7	0.7
Pectoral-fin length	5	33.8	32.7 35.0	1.1
Pelvic-fin length	5	33.6	31.1 35.5	1.6
Last dorsal-fin spine length	5	15.2	13.4 16.0	1.0

B. pardus

	n	Mean	Range	SD
			min max	
Standard length (mm)	12	68.8	54.9 76.9	
Head length	12	34.1	32.8 36.7	1
Snout length	12	11.8	9.7 13.3	1
Body depth	12	39.5	38.1 42.2	1
Orbital diameter	12	11.6	10.5 12.5	0.6
Head width	12	19.1	17.9 19.7	0.5
Interorbital width	12	10.4	9.3 11.2	0.5
Preorbital depth	12	7.5	6.1 8.2	0.7
Caudal-peduncle depth	12	15.5	14.4 17.3	0.8
Caudal-peduncle length	12	13.6	12.2 14.7	0.8
Pectoral-fin length	12	30	28.5 31.8	1.2
Pelvic-fin length	12	32.4	29.6 36.2	1.9
Last dorsal-fin spine length	12	13.2	11.8 14.3	0.8

B. peregrinabunda

	n	Mean	Range	SD
			min max	

Standard length (mm)	3	69.2	63.2	78.3	
Head length	3	33.0	32.1	33.5	0.9
Snout length	3	8.0	7.9	8.3	0.2
Body depth	3	44.9	44.6	45.1	0.3
Orbital diameter	3	11.8	11.2	12.2	0.5
Head width	3	18.4	18.2	18.6	0.2
Interorbital width	3	11.7	11.4	11.9	0.3
Preorbital depth	3	7.7	6.8	8.2	0.7
Caudal-peduncle depth	3	16.2	15.7	17.1	0.8
Caudal-peduncle length	3	13.4	12.3	14.4	1.0
Pectoral-fin length	2	35.1	34.5	35.6	0.6
Pelvic-fin length	3	33.7	32.5	34.5	1.0
Last dorsal-fin spine length	3	18.4	18.1	18.8	0.3

B. robusta

	n	Mean	Range min	max	SD
Standard length (mm)	6	78.0	70.6	87.6	
Head length	6	33.3	32.1	34.1	0.7
Snout length	6	9.5	8.1	10.6	0.8
Body depth	6	42.4	41.6	44.7	1.2
Orbital diameter	6	10.8	10.4	11.2	0.3
Head width	6	19.0	17.8	19.8	0.8
Interorbital width	6	11.8	10.7	12.9	0.9
Preorbital depth	6	10.0	9.2	10.7	0.6
Caudal-peduncle depth	6	17.1	16.3	17.8	0.6
Caudal-peduncle length	6	13.7	12.6	14.7	0.9
Pectoral-fin length	6	31.6	30.3	33.2	1.2
Pelvic-fin length	6	39.8	37.0	42.8	2.4
Last dorsal-fin spine length	6	16.5	15.6	17.3	0.6

B. sypilus

	n	Mean	Range min	max	SD
Standard length (mm)	14	66.7	52.4	103.0	
Head length	14	33.9	31.8	35.6	1.1
Snout length	14	8.0	6.9	9.8	0.8
Body depth	13	45.0	42.8	48.1	1.5
Orbital diameter	14	12.5	11.2	14.2	0.8
Head width	14	19.4	18.9	20.2	0.4
Interorbital width	14	12.2	11.1	13.9	0.8
Preorbital depth	14	8.5	7.6	10.1	0.8
Caudal-peduncle depth	14	17.2	16.4	17.7	0.4
Caudal-peduncle length	14	12.4	11.1	13.1	0.6
Pectoral-fin length	14	38.8	35.7	40.1	1.1
Pelvic-fin length	14	38.2	33.5	44.6	2.8
Last dorsal-fin spine length	12	19.0	17.0	20.6	1.1

B. tambopatae

	n	Mean	Range min	max	SD
Standard length (mm)	8	66.0	49.4	81.5	
Head length	8	33.9	32.3	35.0	0.8

Snout length	8	8.5	7.7	10.0	0.8
Body depth	8	41.8	39.2	43.4	1.8
Orbital diameter	8	12.0	11.3	13.1	0.6
Head width	8	19.0	18.2	19.4	0.4
Interorbital width	8	11.4	10.0	12.3	0.8
Preorbital depth	8	8.2	6.5	9.4	1.2
Caudal-peduncle depth	8	16.5	15.5	17.3	0.6
Caudal-peduncle length	8	11.5	10.7	12.5	0.6
Pectoral-fin length	8	35.2	32.6	37.0	1.3
Pelvic-fin length	8	40.8	33.2	48.0	4.7
Last dorsal-fin spine length	8	18.1	16.4	19.7	1.2

B. vittata

	n	Mean	Range		SD
			min	max	
Standard length (mm)	8	53.7	44.9	68.7	
Head length	8	35.6	34.3	36.8	0.9
Snout length	8	8.7	8.1	9.6	0.5
Body depth	8	45.2	43.7	47.0	1.3
Orbital diameter	8	12.8	12.5	13.4	0.3
Head width	8	20.7	20.3	21.1	0.3
Interorbital width	8	12.4	11.4	13.8	0.7
Preorbital depth	8	8.7	8.0	9.8	0.6
Caudal-peduncle depth	8	18.8	18.2	19.5	0.4
Caudal-peduncle length	8	11.4	10.6	12.6	0.6
Pectoral-fin length	7	39.2	37.7	41.3	1.4
Pelvic-fin length	8	39.1	33.3	44.9	3.8
Last dorsal-fin spine length	8	19.5	18.5	20.5	0.8